REMARKS

The final Office action mailed on 12 September 2006 (Paper No. 20060908) has been carefully considered.

Claims 3, 8, 10 and 18 are being canceled without prejudice or disclaimer, and claims 1, 2, 4 thru 7, 9, 11 thru 17 and 19 thru 26 are being amended. Thus, claims 1, 2, 4 thru 7, 9, 11 thru 17 and 19 thru 26 are pending in the application.

It should be noted that each of the amended claims is being amended for the purpose of improving its form only, with no substance being added to or deleted from the amended claims. In addition, independent claims 1, 9 and 15 are being amended to include the recitations from dependent claims 3, 10 and 18, respectively, while dependent claim 26 is being amended to appear in independent form by incorporating the recitations from preceding independent claim 1, respectively. Thus, the subject matter of each of the amended claims has been previously searched and considered by the Examiner, and therefore no new issue issues requiring further consideration and/or search are raised by the claim amendments now presented. Accordingly, this Amendment After Final should be entered.

In paragraph 2 of the final Office action, the Examiner rejected claims 1 thru 25 under 35 U.S.C. §102 for alleged anticipation by Kirsten, U.S. Patent No. 6,011,901. In

paragraph 3 of the final Office action, the Examiner rejected claims 1 thru 26 under 35 U.S.C. §102 for alleged anticipation by Kim, U.S. Patent No. 6,912,351. For the reasons stated below, it is submitted that the invention recited in the claims, as now amended, is distinguishable from the prior art cited by the Examiner so as to preclude rejection under 35 U.S.C. §102 and §103.

No claim can be considered to be anticipated under 35 U.S.C. §102 (b) unless all of the elements are found in exactly the same situation and united in the same way in a single prior art reference. As mentioned in the **MPEP §2131**, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Every element must be literally present and arranged as in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913, 1920 (CAFC 1989). The identical invention must be shown in as complete detail as is contained in the patent claim. *Id.*, "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 165 USPQ 494, 496 (CCPA 1970), and MPEP 2143.03.

In paragraph 2 on page 2 of the current final Office action, the Examiner states that claims 1 thru 25 are rejected under 35 U.S.C. §102 (b) as being allegedly anticipated by Kirsten '901 "as set forth in the previous Office action dated 06/30/2006" (quoting from

paragraph 2 on page 2 of the final Office action). Therefore, in the following analysis, statements or allegations set forth by the Examiner will be with reference to such statements and allegations as contained in the previous Office action of June 30, 2006 (Paper No. 20060401).

With respect to claims 1, 2 and 8, the Examiner states that Kirsten '901 discloses a multi-channel image encoding apparatus and method (fig. 2-5, 8) for selectively receiving image signals (70) transmitted through a plurality of input channels (cameras 1-8) and encoding (74) the image signals, comprising:

a channel data processor (see col. 9, line 7-40, figs. 4-5, 8: 72, 102 & 104 serve as channel data processor for selectively storing and outputting selected data) comprising a frame buffer group including a plurality of frame buffers for each input channel in order to receive a plurality of frame data through the plurality of input channels and to store the plurality of frame data (i.e. 102, which consists of memory arrays), the channel data processor for selecting data transmitted to the frame buffer group to output the selected data (the selected output data is outputted from 102), the channel data processor storing each unit of the frame data into the frame buffer group corresponding to each channel in accordance with a set-up input channel selection order (col. 9, line 29-35, Note: the field/frame capture consists of memory arrays to store an array of image data in a particular array locations based on an order from selector control 114-see col. 10, line 30-49);

and an encoder for encoding image signals output from the channel data processor with a Moving Picture Experts Group method (74, col. 12, line 52 - col. 13, line 25).

However, Kirsten '901 fails to disclose a frame buffer group including a plurality of frame buffers for each input channel in order to receive a plurality of frame data through the plurality of input channels and to store the plurality of frame data as claimed. In fact, field/frame capture element 102 appearing in Figure 4 of Kirsten '901 consists of memory arrays but fails to disclose the claimed limitation. In the present invention, each one of the input channels includes frame buffers for each input channel, while Kirsten '901 only generally discloses memory arrays. In that regard, column 9, lines 30-32 of Kirsten '901 states the following: "Synchronization data 116 is used to key the image data into correct array locations." The disclosure is only to key to a correct location, and thus there is no disclosure of segregation based on channel on the frame buffers, or that the frame buffer group includes a plurality of frame buffers for each input channel as claimed. Respectfully, according to MPEP §2131, the identical invention must be shown in as complete detail as is contained in the patent claim, and the claimed subject matter is not disclosed in Kirsten '901.

In addition, Kirsten '901 fails to disclose *the channel data processor storing each unit of the frame data into the frame buffer group corresponding to each channel in accordance with a set-up input channel selection order*. Kirsten '901 only discloses

"Synchronization data 116 is used to key the image data into correct array locations." Keying image data to correct locations is not identical to storing each of the data into the frame buffer group *corresponding to each channel* in accordance to a setup *input* channel selection order. The relation to channel is not made in the setup, and it is not according to input channel selection order. Thus, the identical invention, as claimed, is not disclosed in Kirsten '901 as mandated by MPEP §2131.

Furthermore, Kirsten '901 fails to disclose or suggest "the channel data processor for selecting data transmitted to the frame buffer group to output the selected data (the selected output data is outputted from 102)" (quoting from page 3, lines 4-5 of the Office action of April 4, 2006). In the latter regard, referring to Figure 1 of the present application, the channel data processor 10 of the present invention has a first multi-switch unit 11 for selectively contacting each of the input channels ch1 thru ch4 with the frame buffer group 12a, 12b, 12c or 12d corresponding to each of the input channels, and a second multi-switch unit 15 for selectively contacting the frame buffer group 12a, 12b, 12c or 12d with the encoder 20 and outputting data output from the frame buffer group 12a, 12b, 12c or 12d to the encoder 20. That is to say, the first multi-switch unit 11 functions to provide a data input to the frame buffer groups 12a thru 12d, while the second multi-switch unit 15 functions to output data from the frame buffer groups 12a thru 12d and to provide that data to the encoder 20.

In contrast, referring to Figure 4 of Kirsten '901, whereas there is a video selector or switch unit 70 on the input side of the field/frame capture unit 102, there is not a corresponding switch unit on the output side of the field/frame capture unit 102. Thus the arrangement of Kirsten '901, as shown in Figure 4, does not have the capability of "selecting data transmitted to the frame buffer group to output the selected data" (again, quoting from page 3, lines 4-5 of the Office action of a April 4, 2006), as alleged by the Examiner. This provides a further distinction between the claimed invention (as recited in claims 1, 9, 18 and 26) and the disclosure of Kirsten '901.

In the latter regard, in the Office action of April 4, 2006, in rejecting previous dependent claim 3, the Examiner referred to the "second multi-switch unit for selectively contacting with the frame buffer group and outputting data output from the frame buffer group to the encoder", and alleged that "Kirsten discloses this aspect (see fig. 4-5 which clearly show the first and second multi-switch unit as claimed)" (quoting from page 3, lines 16-19 of the Office action of April 4, 2006). However, a review of Figures 4 and 5 of Kirsten '901 fails to reveal any element corresponding to the second multi-switch unit recited in the claims. In that regard, it is noted that, in the aforementioned quotation, and in referring to Figures 4 and 5 of Kirsten '901, the Examiner did not specify any element by reference numeral corresponding to the recited second multi-switch unit. Thus, as stated above, the recitation of the second multi-switch unit provides a further distinction between the claimed invention and the disclosure of Kirsten '901.

On page 3 of the Office action of 4 April 2006, the Examiner states that the limitations as claimed have been analyzed and rejected with respect to claims 1 and 3 above. However, in addition to the comments relative to claim 1, Kirsten '901 also fails to disclose a second multi-switch which contacts the frame buffer group in accordance with a set-up input channel contact order as recited in claim 4. The order in Kirsten '901 is not based on the channel. Rather, as mentioned in Kirsten '901, "synchronization data 116 is used to key the image data into correct array locations", and keying to "correct" array locations is not according to the set-up channel contact order.

Kirsten '901 mentions that the video selector 70 offers an increase in single-field acquisition rates by allowing the invention to control the order of video source selection according to relative phases of the sources. However, the information is not being arranged where there is a plurality of buffers for each input channel. Such connection is not disclosed, and thus there is no disclosure or suggestion of storing of each unit of frame data into a frame buffer group corresponding to the input channels according to a selection order.

In the Office action of 4 April 2006 (page 4 thereof), the Examiner alleges that the subject matter of claim 5 is disclosed in Kirsten '901 as follows: "(see figs. 4-5: 74, which also exemplified in details in figs. 11C & 11D, col. 12, line 66 - col. 13, line 25, Note: Kirsten discloses an MPEG encoder which inherently incorporates all of the above

limitations of an encoder as claimed)" -- quoting from page 4, lines 12-14 of the Office action.

However, Kirsten '901 does not disclose all of the above limitations, including for example the discrete cosine transformer as recited in the claim. Kirsten '901 states that "[m]ethods based on transform coding such as DCT (discrete-cosine transform) or wavelet transforms are suitable for compressing surveillance video. JPEG is a DCT-based intraframe technique for still images." However, this does not constitute a disclosure of a DCT operating on signals inputted from the *second* multi-switch unit, as claimed.

Furthermore, the quantizer as recited in the claims is not disclosed or suggested in Kirsten '901. In this regard, general descriptions are not sufficient; rather, the identical invention as recited in the claims must be disclosed. Although a DCT in general is mentioned, there is no mention of quantizing the signals from the DCT and then inversely quantizing the quantized signals as recited in the claim.

Furthermore, the recited inverse DCT is not mentioned specifically in Kirsten '901. There is no mention of such an inverse unit. The recited prediction memory is also not mentioned. The actual structure of the invention must be disclosed identically according to MPEP §2131 in order that the rejection under 35 U.S.C. §102 (b) be proper.

On page 4 of the Office action, the Examiner states that the subject matter recited in claim 6 is disclosed in Kirsten '901 as follows: "(see figs. 4-5: 74, which also exemplified in details in figs. 11C & 11D, col. 12, line 66 - col. 13, line 25, Note: Kirsten discloses an MPEG encoder which inherently incorporates all of the above limitations of an encoder as claimed)" -- quoting from the last four lines on page 4 of the Office action of 4 April 2006.

However, a variable length encoder for processing signals from the quantizer is not disclosed. An encoder is mentioned, but no specific disclosure of a variable length encoder for encoding signals from a quantizer is provided in Kirsten '901. In addition, Kirsten '901 does not disclose a parser for loading channel information from the variable length encoder.

On page 5 of the Office action of 4 April 2006, referring to claim 9, the Examiner states that the claimed prediction memory is disclosed in Kirsten '901 as follows: "(see e.g., figs. 11C & 11D, the prediction memory for each respective channel is shown as 208-1 to 208-8)" -- quoting from page 5, lines 13-14 of the Office action. However, Kirsten '901 only states that "A 210 selects the previously stored image associated with video stream 1 from image store 1 208-1." This does not constitute the disclosure of a prediction memory.

On page 6 of the Office action of 4 April 2006, the Examiner states that the subject matter of claims 15 and 21 is disclosed in Kirsten '901 as follows: "(see figs. 11A-11D, col. 12, line 52 - col. 13, line 11. Note: the coding modes are "intraframe" and "interframe" coding modes)" -- quoting from page 6, lines 8-9 of the Office action.

In the latter regard, Kirsten '901 only states that intraframe compression generates a set of data for each original image which, taken alone, sufficiently represents the original image, and that intraframe compression is often referred to as still-image compression, as still images are treated independently without relation to other images in the time sequence. However, in intraframe, a comparison is not made, and therefore intraframe cannot be mentioned as the second mode since the claim states that there is a comparison between the images. Moreover, referring to claim 21, the intraframe cannot be used as the similarities have different reference values between the modes.

In addition, it should be noted that amended independent claim 15 now includes the detailed recitation of the channel data processor previously recited in dependent claim 18, and that limitation is also not disclosed in or suggested by Kirsten '901.

Based on the above analysis, it is respectfully submitted that Kirsten '901 does not disclose or suggest each of the elements, functions or operations recited in independent claims 1, 9, 14, 15, 23 and 26 of the present application, as now amended. Thus, a

rejection under 35 U.S.C. §102 (b) is clearly inappropriate. Moreover, since the elements, functions or operations of the claims are not even suggested in Kirsten '901, a rejection under 35 U.S.C. §103 is also inappropriate.

As mentioned above, in the present final Office action, Kim '351 was newly cited against claims 1 and 26 under 35 U.S.C. §102 (b). For the reasons stated below, it is submitted that Kim '351 does not anticipate the invention recited in claims 1 and 26 so that a rejection under 35 U.S.C. §102 (b) is clearly inappropriate.

Figure 2 of Kim '351 (cited by the Examiner in paragraph 3 of the final Office action) is a block diagram of a time lapse recording apparatus according to the disclosure of Kim '351. Basically, the arrangement of Figure 2 of Kim '351 comprises an input selector 80, an analog-to-digital (A/D) convertor 90, a collection of frame memories 100, an encoder 110, a digital signal processor 120, a multiplexer 130, a recording/reproduction unit 140, a controller 150, a demultiplexer 131, a decoder 111, another digital signal processor 121, an additional collection of frame memories 101, and a digital-to-analog (D/A) convertor 91.

In paragraph 3 on page 2 of the final Office action, the Examiner states that the combination of elements 80, 90, 100 and 110 of Figure 2 of Kim '351 correspond to the channel data processor recited in claims 1 and 26. However, the Examiner further states

(on page 3 of the final Office action) that the encoder 110 of Figure 2 of Kim '351 corresponds to the recited encoder of claims 1 and 26. In view of the redundant citation of encoder 110 as being a part of the channel data processor and also constituting the recited encoder of claims 1 and 26, it is presumed that the Examiner intended to state that the elements 80, 90 and 100 alone constituted or corresponded to the channel data processor recited in claims 1 and 26, while the encoder 110 of Figure 2 of Kim '351 corresponded to the recited encoder of claims 1 and 26.

In any event, on page 3 of the final Office action, the Examiner also alleged that the input selector 80 of Figure 2 of Kim '351 corresponded to the first multi-switch unit recited in claims 26, and now recited in both claim 1 and claim 26.

With respect to the second multi-switch unit recited in claims 1 and 26, on page 3 of the final Office action, the Examiner alleged that "S03 of fig. 3" corresponded to that claimed element of the present invention (*see* page 3, lines 5-6 of the final Office action). However, step S03 of Figure 3 of Kim '351 merely states the following: "GENERATE I-PICTURE FRAME BY ENCODING IMAGE DATA STORED IN FRAME UNITS". It is respectfully submitted that this does not constitute a disclosure or suggestion of the function of the second multi-switch unit as recited in claims 1 and 26, that is, the function of "selectively contacting the frame buffer group with the encoder and outputting data output from the frame buffer group to the encoder" as recited in claim 1, or the function

of "selectively contacting with said each one of the plurality of frame buffers of the frame buffer group corresponding to said each one of the input channels, and outputting to the encoder data outputted from the plurality of frame buffers of the frame buffer group corresponding to said each one of the input channels" as recited in claim 26. That is to say, in order to selectively contact the frame buffer group with the encoder so as to accomplish the full range of functions recited in claims 1 and 26, Kim '351 would have to disclose an element between the frame memory 100 and the encoder 110 for performing that operation. Step S03 of the flowchart of Figure 3 of Kim '351 does not constitute a disclosure or suggestion of such a "selectively contacting" function or a disclosure or suggestion of the other functions recited with respect to the second multi-switch unit of claims 1 and 26 since step S03 merely constitutes a disclosure of the generation, **within the encoder 110**, of I-Picture frame data by encoding image data stored in frame units.

For the reasons stated above, it is submitted that the invention recited in claims 1 and 26 is not anticipated by Kim '351 under 35 U.S.C. §102 (b), and thus that rejection should be withdrawn. Furthermore, since there is no mention or suggestion whatsoever of the provision of a multi-switch unit between the frame memory unit 100 and the encoder 110 of Figure 2 of Kim '351, it cannot be said that Kim '351 renders the inventions recited in claims 1 and 26 obvious under 35 U.S.C. §103.

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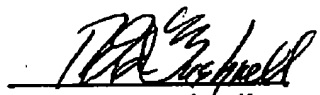
In view of the above, it is submitted that the claims of this application are in condition for allowance, and early issuance thereof is solicited. Should any questions remain unresolved, the Examiner is requested to telephone Applicant's attorney.

No fee is incurred by this Amendment After Final.

Respectfully submitted,



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